1949

# FEDERAL-STATE
# COOPERATIVE SNOW SURVEYS and
# IRRIGATION WATER FORECASTS

For

MONTANA

MAY 15, 1949

by

Montana Agricultural Experiment Station
and
Division of Irrigation, Soil Conservation Service
United States Department of Agriculture

in cooperation with

U.S. Forest Service....U.S. National Park Service....U.S. Bureau of Reclamation....U.S. Geological Survey and State Engineer of Montana

and

Comptroller of Water Rights, British Columbia

# MAY 15 SUMMARY
# OF IRRIGATION WATER SUPPLY FOR MONTANA

Snow survey measurements were made on or about the 15th of May, at key courses in the Upper Missouri and Upper Columbia River Basins to obtain additional data on irrigation water supply. Although there is little or no comparative data these measurements show that on the high elevation courses there is a good supply of stored water for this season as of May 15. The Upper Columbia Basin shows a better coverage than does the Upper Missouri. Narrative data by some snow surveyors indicate that the north exposed slopes are well covered with snow at this date.

The ideal melt season during April and the first 15 days of May has brought the snow melt water out of the mountains without exceptional high peak flows except on the Upper Kootenai where a short peak above bankful capacity was reached. During the first week in May, some lowlands were enundated. Aside from bankful capacities being exceeded in local areas, the danger of extremely high peak flows has passed from the snow melt water in the Upper Columbia. However, a prolonged and heavy rain would cause considerable damage at this time in this basin. On the Upper Missouri Basin, with considerable snow at high elevations and approaching the rainy season of June; the probability of high peak flows still exists in local areas.

MONTANA SNOW SURVEYS May 15, 1949

COLUMBIA BASIN

| DRAINAGE BASIN AND SNOW COURSE ** | State | No. | Elev. | Date of Survey 1949 | Snow Depth (In.) 1949 | SNOW MEASUREMENTS Water Content (Inches) May 15 1949 | Per Cent Density | Change Since May 1* | May 1 1948 | May 1 1949 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Upper Columbia River** | | | | | | | | | | |
| Revelstock | Canada | | 6000 | 5/14 | 67.6 | 47.1 | 69 | 10.5 | 49.1 | 36.6 |
| Glacier | " | | 4100 | 5/15 | 8.3 | 4.5 | 55 | -8.1 | 27.2 | 12.6 |
| Kicking Horse | " | | 5400 | 5/14 | NO | SNOW | ---- | -2.5 | 10.3 | 2.5 |
| Marble Canyon | " | | 5000 | 5/14 | 2.5 | 1.1 | 44 | -9.1 | 12.1 | 10.2 |
| Sullivan Mine | " | | 5100 | 5/15 | 2.4 | 0.9 | 37 | -7.0 | 9.9 | 7.9 |
| Sinclair Pass | " | | 4500 | 5/15 | NO | SNOW | ---- | -0.2 | 0.8 | 0.2 |
| **Kootenai River** | | | | | | | | | | |
| Baree Mountain | Montana | 1 | 6000 | 5/16 | 75.9 | 40.8 | 54 | -9.3 | 47.2 | 50.1 |
| Bluebird Basin | " | 24 | 6800 | 5/16 | 53.1 | 24.3 | 46 | -12.4 | ---- | 36.7 |
| **Upper Clark Fork** | | | | | | | | | | |
| Storm Lake | Montana | 11 | 7780 | 5/12 | 20.9 | 7.7 | 37 | -5.0 | 21.2 | 12.7 |
| Slide Rock Mt. | " | 8 | 7100 | 5/16 | 15.0 | 4.8 | 32 | -7.4 | ---- | 12.2 |
| Stemple Pass | " | 16 | 6900 | | NO | SNOW | | | | |
| Stuart Mt. | " | 13 | 7400 | 5/16 | 14.8 | 7.5 | 51 | -14.7 | 31.1 | 22.2 |
| Skalkaho Summit | " | 7 | 7258 | 5/17 | 22.4 | 14.4 | 61 | -10.4 | 26.7 | 24.8 |
| **Bitterroot River** | | | | | | | | | | |
| Packers Meadow | Idaho | | 5700 | 5/18 | 3.2 | 2.0 | 62 | -22.7 | 21.9 | 24.7 |
| Stuart Mt. | Montana | 13 | 7400 | 5/16 | 14.8 | 7.5 | 51 | -10.4 | 26.7 | 24.8 |
| **Flathead River** | | | | | | | | | | |
| Desert Mt. | Montana | 3 | 5600 | 5/16 | NO | SNOW | ---- | -10.9 | 14.9 | 10.9 |
| Baree Mt. | " | 1 | 6000 | 5/16 | 75.9 | 40.8 | 54 | -9.3 | 47.2 | 50.1 |
| Benton Springs | Idaho | | 2344 | 5/18 | NO | SNOW | ---- | -26.4 | 20.6 | 26.4 |
| Freezeout | Montana | 6 | 7000 | 5/16 | 44.8 | 24.2 | 54 | -12.1 | 30.3 | 36.3 |
| Hell Roaring Cr. | " | 6 | 5770 | 5/17 | 18.9 | 9.8 | 53 | -16.9 | 31.0 | 26.7 |
| Lookout | Idaho | | 5250 | 5/17 | 28.0 | 15.6 | 56 | -21.0 | 34.8 | 36.6 |

* Change since May 1 indicates the LOSS (-) or GAIN (no sign) during the month of May.

** Location of course shown on Index Map.

MONTANA SNOW SURVEYS May 15 , 1949

MISSOURI BASIN

| DRAINAGE BASIN AND SNOW COURSE ** | State | No. | Elev. | Date of Survey 1949 | Snow Depth (In.) 1949 | SNOW MEASUREMENTS Water Content (Inches) May 15 1949 | Per Cent Density | Change Since May 1 * | May 1 1948 | May 1 1949 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Jefferson River** | | | | | | | | | | |
| Jahnke Creek | Montana | 24 | 7340 | 5/16 | NO | SNOW | ---- | ---- | ---- | 12.6 |
| Goldstone | " | 22 | 8100 | 5/16 | 21.2 | 12.4 | 58 | -3.4 | ---- | 15.8 |
| Terrell Creek | " | 20 | 6650 | 5/16 | NO | SNOW | ---- | 0.0 | ---- | 0 |
| Selway Junction | " | 21 | 6800 | 5/16 | NO | SNOW | ---- | -12.0 | ---- | 12.0 |
| Elk Horn | " | 11 | 8450 | 5/13 | NO | SNOW | ---- | -5.5 | 8.8 | 5.5 |
| **Madison River** | | | | | | | | | | |
| Twenty-One Mile | Montana | 6 | 7150 | 5/17 | 2.7 | 1.3 | 48 | -11.4 | 12.6 | 12.7 |
| **Gallatin River** | | | | | | | | | | |
| Twenty-One Mile | Montana | 6 | 7150 | 5/17 | 2.7 | 1.3 | 48 | -11.4 | 12.6 | 12.7 |
| **Missouri Main Stem** | | | | | | | | | | |
| Kings Hill | Montana | 25 | 7950 | 5/16 | 10.8 | 4.3 | 40 | -8.5 | 14.6 | 12.8 |
| Stemple Pass | " | 16 | 6900 | 5/16 | NO | SNOW | ---- | -6.3 | 8.3 | 6.3 |
| **Marias River** | | | | | | | | | | |
| Marias Pass | Montana | 21 | 5250 | 5/16 | 2.2 | 1.0 | 45 | 11.1 | 15.3 | 12.1 |
| **Yellowstone River** | | | | | | | | | | |
| Canyon #2 | Wyoming | 2 | 7750 | 5/15 | 1.5 | 0.5 | 30 | | 10.8 | 9.7 |
| Lake | " | 1 | 7850 | 5/15 | 1.0 | 0.4 | 25 | | ---- | 7.6 |

* Change since May 1 indicates the LOSS (-) or GAIN (no sign) during the month of May.
** Location of course shown on Index Map.